

110TH CONGRESS  
1ST SESSION

# H. R. 1533

To provide for the establishment of a national mercury monitoring program.

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## IN THE HOUSE OF REPRESENTATIVES

MARCH 15, 2007

Mr. ALLEN introduced the following bill; which was referred to the Committee on Energy and Commerce

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## A BILL

To provide for the establishment of a national mercury monitoring program.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “Comprehensive Na-  
5       tional Mercury Monitoring Program Establishment Act”.

6       **SEC. 2. FINDINGS.**

7       Congress finds the following:

8               (1) Mercury is a potent neurotoxin of signifi-  
9       cant ecological and public health concern. Exposure  
10      to mercury occurs largely by consumption of con-  
11      taminated fish. Children and women of childbearing

1 age who consume large amounts of fish are at high  
2 risk of adverse effects. It is estimated that 200,000  
3 to 400,000 children born each year in the United  
4 States have been exposed to mercury levels in their  
5 mothers' wombs high enough to impair neurological  
6 development. The Centers for Disease Control and  
7 Prevention have found that eight percent of the  
8 women in the United States of childbearing age have  
9 blood mercury levels in excess of values deemed safe  
10 by the Environmental Protection Agency.

11 (2) As of 2004, fish consumption advisories due  
12 to mercury contamination have been issued for 44  
13 States, including 21 statewide advisories for  
14 freshwaters and 12 statewide advisories for coastal  
15 waters. These advisories represent more than 52,000  
16 square kilometers of lakes and 1,230,000 kilometers  
17 of rivers. Yet, fish and shellfish are an important  
18 source of dietary protein, and a healthy fishing re-  
19 source is important to the economy. The extent of  
20 fish consumption advisories underscores the exten-  
21 sive human and ecological health risk posed by mer-  
22 cury pollution.

23 (3) In most locations, the primary route for  
24 mercury input to aquatic ecosystems is by atmos-  
25 pheric transport and deposition. Mercury's inter-

1       action with the environment and bioaccumulation in  
2       biota are not fully understood. Computer models and  
3       other assessment tools predict varying effectiveness  
4       in reducing mercury concentrations in fish, and no  
5       broad-scale data sets exist to test model predictions.

6           (4) In September 2003, the Society of Environ-  
7       mental Toxicology and Chemistry convened a work-  
8       shop of 32 mercury scientists to develop a system to  
9       measure and document changes resulting from re-  
10      ductions in mercury emissions in the United States.  
11      The resulting plan is documented in the book “State  
12      of Science for Mercury Effects: Assessment for  
13      Aquatic and Terrestrial Environments”, published in  
14      2007.

15          (5) On January 1, 2005, “Monitoring the Re-  
16      sponse to Changing Mercury Deposition” was pub-  
17      lished in the periodical Environmental Science and  
18      Technology. The article proposed a “holistic, multi-  
19      media, long-term mercury monitoring program”.

20          (6) Many regulations limiting mercury emis-  
21      sions have either gone into effect or will soon be en-  
22      acted, but scientists are not adequately measuring  
23      the environmental benefits of reduced mercury emis-  
24      sions. As governments advance regulations, govern-

1       ments should document whether their rules are ef-  
2       fective.

3           (7) On May 15, 2006, the Office of Inspector  
4       General of the Environmental Protection Agency  
5       issued a report entitled, “Monitoring Needed to As-  
6       sess Impact of EPA’s Clean Air Mercury Rule  
7       (CAMR) on Potential Hotspots”, Report No. 2006–  
8       P–0025, which states, in part: “Without field data  
9       from an improved monitoring network, EPA’s ability  
10      to advance mercury science will be limited and ‘util-  
11      ity-attributable’ hotspots that pose health risks may  
12      occur and go undetected” and “We recommend that  
13      EPA develop and implement a mercury monitoring  
14      plan to (1) assess the impact of CAMR, if adopted,  
15      on mercury deposition and fish tissue; and (2) evalu-  
16      ate and refine mercury estimation tools and mod-  
17      els”.

18          (8) On January 4, 2007, “Contamination in  
19      Remote Forest and Aquatic Ecosystems in the  
20      Northeastern U.S.: Sources, Transformations and  
21      Management Options” and “Biological Mercury  
22      Hotspots in the Northeastern U.S. and Southeastern  
23      Canada” were published in the journal BioScience.  
24      The authors identified five biological mercury  
25      hotspots and nine areas of concern in the north-

1 eastern United States and southeastern Canada as-  
2 sociated primarily with atmospheric mercury emis-  
3 sions and deposition. They further located an area  
4 of particularly high mercury deposition adjacent to  
5 a coal-fired electric utility in southern New Hamp-  
6 shire. The authors of the studies concluded that  
7 local impacts from mercury emissions should be  
8 closely monitored in order to assess the impact of  
9 State and Federal policies.

10 **SEC. 3. MONITORING PROGRAM.**

11 (a) ESTABLISHMENT.—The Administrator of the En-  
12 vironmental Protection Agency, in consultation with the  
13 United States Fish and Wildlife Service, the United States  
14 Geological Survey, the Forest Service, the National Park  
15 Service, and the National Oceanic and Atmospheric Ad-  
16 ministration, shall establish a national scale mercury mon-  
17 itoring program. For purposes of such program, the Ad-  
18 ministrator of the Environmental Protection Agency shall  
19 select multiple monitoring sites in ecoregions of the United  
20 States.

21 (b) AIR AND WATERSHED.—The program under this  
22 section shall monitor long-term changes in mercury levels  
23 in the air and watershed, including—

24 (1) at locations selected under subsection (a)  
25 that the Administrator of the Environmental Protec-

1        tion Agency determines appropriate, measuring and  
2        recording wet mercury deposition;

3            (2) at a portion of such locations that the Ad-  
4        ministrator of the Environmental Protection Agency  
5        determines is appropriate, measuring and recording  
6        atmospheric mercury speciation and estimates of the  
7        dry deposition of mercury;

8            (3) at a portion of such locations that the Ad-  
9        ministrator of the Environmental Protection Agency  
10       determines is appropriate, measuring and recording  
11       mercury flux and mercury export; and

12           (4) measuring and recording the level of mer-  
13        cury re-emitted from aquatic and terrestrial environ-  
14        ments into the atmosphere.

15        (c) WATER AND SOIL CHEMISTRY.—The program  
16        under this section shall monitor mercury levels in water  
17        and soil chemistry, including—

18            (1) at a portion of all locations selected under  
19        subsection (a) that the Administrator of the Envi-  
20        ronmental Protection Agency determines is appro-  
21        priate, extracting and analyzing sediment cores;

22            (2) measuring and recording total mercury con-  
23        centration, methyl mercury concentration, and per-  
24        cent methyl mercury in surface sediments;

1           (3) measuring and recording total mercury con-  
2           centration and methyl mercury concentration in sur-  
3           face water; and

4           (4) at a portion of such locations that the Ad-  
5           ministrator of the Environmental Protection Agency  
6           determines is appropriate, measuring and recording  
7           total mercury concentrations and methyl mercury  
8           concentrations throughout the water column.

9           (d) AQUATIC PLANTS AND ANIMALS.—The program  
10          under this section shall monitor mercury levels in plants  
11          and animals, including—

12           (1) measuring and recording methyl mercury  
13           levels in yearling fish;

14           (2) measuring and recording mercury levels,  
15           and other scientific data relevant to assessing the  
16           health of the fish population, in commercially or  
17           recreationally important fish;

18           (3) measuring and recording mercury levels in  
19           the appropriate tissue in reptiles, amphibians, birds,  
20           and mammals; and

21           (4) at a portion of all locations selected under  
22           subsection (a) that the Administrator of the Envi-  
23           ronmental Protection Agency determines is appro-  
24           priate, measuring and recording mercury levels in

1        phytoplankton, algae, zooplankton, and benthic in-  
2        vertebrates.

3        (e) SELECTION OF MONITORING SITES.—The Ad-  
4        ministrator of the Environmental Protection Agency shall,  
5        not later than 12 months after the date of enactment of  
6        this Act and in coordination with the Scientific Advisory  
7        Committee, recommend appropriate sites for monitoring  
8        under the program established under this section.

9        **SEC. 4. SCIENTIFIC ADVISORY COMMITTEE.**

10        (a) ESTABLISHMENT.—There shall be established a  
11        Scientific Advisory Committee to advise the Administrator  
12        of the Environmental Protection Agency on the establish-  
13        ment, site selection, and operation of the national mercury  
14        monitoring program under this Act.

15        (b) MEMBERSHIP.—The Scientific Advisory Com-  
16        mittee shall consist of scientists who are not employees  
17        of the Federal Government, including—

18                (1) 3 scientists appointed by the Administrator  
19                of the Environmental Protection Agency;

20                (2) 2 scientists appointed by the Director of the  
21                United States Fish and Wildlife Service;

22                (3) 2 scientists appointed by the Director of the  
23                National Park Service;

24                (4) 2 scientists appointed by the Director of the  
25                Forest Service;



1           (5) 2 scientists appointed by the Director of the  
2       United States Geological Survey; and

3           (6) 2 scientists appointed by the Administrator  
4       of the National Oceanic and Atmospheric Adminis-  
5       tration.

6   **SEC. 5. REPORTS AND PUBLIC DISCLOSURE.**

7       (a) **REPORTS.**—The Administrator of the Environ-  
8       mental Protection Agency shall transmit to Congress a re-  
9       port on the program under this Act not later than 2 years  
10      after the date of enactment of this Act, and every 2 years  
11      thereafter. Once every 4 years, such report shall include  
12      an assessment of the reduction in mercury deposition rates  
13      that must be achieved in order to prevent adverse ecologi-  
14      cal effects.

15      (b) **AVAILABILITY OF DATA.**—All data obtained pur-  
16      suant to this Act shall be made available to the public.

17   **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

18       There are authorized to be appropriated for carrying  
19      out this Act—

20           (1) for fiscal year 2008—

21               (A) to the Environmental Protection Agen-  
22               cy \$7,000,000;

23               (B) to the United States Geological Survey  
24               \$4,500,000;

1 (C) to the Fish and Wildlife Service  
2 \$4,500,000; and

3 (D) to the National Oceanic and Atmos-  
4 pheric Administration \$2,000,000;

5 (2) for fiscal year 2009—

6 (A) to the Environmental Protection Agen-  
7 cy \$5,000,000;

8 (B) to the United States Geological Survey  
9 \$3,000,000;

10 (C) to the Fish and Wildlife Service  
11 \$3,000,000; and

12 (D) to the National Oceanic and Atmos-  
13 pheric Administration \$1,000,000;

14 (3) for fiscal year 2010—

15 (A) to the Environmental Protection Agen-  
16 cy \$5,250,000;

17 (B) to the United States Geological Survey  
18 \$3,250,000;

19 (C) to the Fish and Wildlife Service  
20 \$3,250,000; and

21 (D) to the National Oceanic and Atmos-  
22 pheric Administration \$1,250,000; and

23 (4) such sums as may be necessary for each of  
24 fiscal years 2011 through 2013 to the Environ-  
25 mental Protection Agency, the United States Geo-

1       logical Survey, the Fish and Wildlife Service, and  
2       the National Oceanic and Atmospheric Administra-  
3       tion.

4   **SEC. 7. DEFINITIONS.**

5       For purposes of this Act:

6           (1) **ECOREGION.**—The term “ecoregion” means  
7       a large area of land and water that contains a geo-  
8       graphically distinct assemblage of natural commu-  
9       nities, including similar land forms, climate, ecologi-  
10      cal processes, and vegetation.

11          (2) **MERCURY EXPORT.**—The term “mercury  
12      export” means mercury flux from a watershed to the  
13      corresponding water body, or from one water body  
14      to another (e.g. a lake to a river), generally ex-  
15      pressed as mass per unit time.

16          (3) **MERCURY FLUX.**—The term “mercury flux”  
17      means the rate of transfer of mercury between eco-  
18      system components (e.g. between water and air), or  
19      between portions of ecosystem components, ex-  
20      pressed in terms of mass per unit time or mass per  
21      unit area per time.

22          (4) **SURFACE SEDIMENT.**—The term “surface  
23      sediment” means sediment in the top 2 centimeters  
24      of a lakebed or riverbed.

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